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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,082	12/17/2001	Ichiro Fujieda	15168	7772

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EXAMINER

MACCHIAROLO, PETER J

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/023,082

Applicant(s)

FUJIEDA ET AL.

Examiner

Peter J Macchiarolo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-19 is/are allowed.
- 6) ☒ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s): 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s): ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed December 17, 2001 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims, and any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Therefore, the predetermined pattern having a plurality of openings as recited in claims 1, 2, 4, 5, 15, 16, 18, and 19 must be shown or the feature canceled from the claims. No new matter should be entered. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claims 2-5 are objected to because of the following informalities:
5. The term in line 1 of claims 2 and 3 “wherein” is being interpreted by the Examiner as “comprising” for the claims.
6. The claim structure used by Applicant does not conform to standard U.S. practice, and is difficult to interpret. Specifically, the claims do not clearly contain a preamble, a transitional word, or a main body. See MPEP §608.01(m). The Examiner is interpreting the preamble of claims 4 and 5 as, “A light emitting device, wherein a TFT is...are stacked above the TFT.” Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
8. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They are replete with grammatical and idiomatic errors. For instance, the limitation in lines 10-11 of claim 4, “a predetermined pattern having a plurality of opening is formed to the insulating base material and below the luminous material,” is unclear. The Examiner is

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interpreting this limitation as openings, formed below the luminous material, which advance in the direction of the insulating base.

9. Furthermore, claim 5 recites the limitation “an insulating layer,” in line 3. This limitation renders the claim indefinite, since where a claim directed to a device can be read to include the same element twice, it is considered indefinite. *Ex parte Kristensen*, 10 USPQ2d 1701 (Bd. Pat. App. & Inter. 1989). It is not clear if the claim refers to an additional insulating material or the same insulating base material as claimed in line 2. The Examiner is interpreting these limitations to be different elements.

AS BEST UNDERSTOOD, THE FOLLOWING PRIOR ART REJECTIONS APPLY

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

10. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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11. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al (USPN 6,433,487; "Yamazaki").

12. In regards to claims 1 and 6, Yamazaki discloses in figure 1, a light emitting device having thin film transistor (TFT, 202) fabricated on an insulating base material (11); a luminous section including a luminous material layer (46) and electrode layers (43, 44) fabricated above the TFT; and a predetermined pattern having a plurality of openings is developed to the insulating base material or at least one material placed above the insulating base material (42) and below the luminous material layer, which is made of organic materials.¹

13. In regards to claims 2 and 7, Yamazaki discloses in figures 1 and 3A, a light emitting device having at least a first electrode layer (47) to supply current to an organic luminous material layer (46), and a second electrode layer (44) stacked above an insulating base material (42), the first electrode layer is made of a transparent material; and concavities and convexities are formed to the luminous material layer and the other electrode layer.

14. The Examiner notes that the claim limitation "a predetermined pattern having a plurality of openings is developed to the electrode layer made of the transparent material," is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation.

Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

¹ Yamazaki, column 19, lines 48-50.

15. In regards to claims 3 and 8, Yamazaki discloses in figures 1 and 3A, a light emitting device having at least a first electrode layer (47) to supply current to a luminous material layer (46), and a second electrode layer (44), are stacked above an insulating base material (42), and the first electrode layer is made of a transparent material; the first electrode layer having a comb shape in plane view, and the luminous material layer, which is made of organic material, and the other electrode layer stacked on the electrode layer made of the transparent material are formed in the shape of concavities and convexities in side view.

16. The Examiner notes that the limitation, “comb shape” is being interpreted as broadly as shown in figure 11, i.e. a main body having a plurality of projections thereof, which Yamazaki discloses in figure 3A.

17. In regards to claims 4 and 9, Yamazaki discloses in figure 1, a light emitting device having a TFT (202) fabricated on an insulating base material (11); at least an insulating layer (42) a first electrode layer (47) to supply current to an organic luminous material layer (46), a second electrode layer (43), wherein the first electrode layer is made of a transparent material,² the second electrode layer is made of a reflecting material,³ a predetermined pattern having a plurality of openings is formed to the insulating base material below the luminous material layer, and the first electrode layer is formed on convex section of the insulating layer owing to the plurality of openings.

² Yamazaki, column 8, lines 6-15.

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18. In regards to claims 5 and 10, Yamazaki discloses in figure 1, a light emitting device having a TFT (202) fabricated on an insulating base material (11) at least an insulating layer (42) a first electrode (43) to supply current to an organic luminous material layer (46), a second electrode layer (47) stacked above the TFT; the second electrode layer is made of a transparent material; the first electrode layer is made of a reflecting material, a predetermined pattern having a plurality of openings is formed to the insulating base material below the luminous material layer, and the second electrode layer is formed on convex section of the insulating layer owing to the plurality of openings.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

³ Yamazaki, column 7, lines 17-20.

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20. Claims 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamazaki.

21. In regards to claims 11-14, Yamazaki discloses all of the recited limitations of claims 2-5 (above).

22. Yamazaki further teaches the luminous layer may be made of inorganic materials.⁴

Yamazaki is silent to a first insulating layer being formed between the luminous material layer and the first electrode, and a second insulating layer is formed between the luminous material layer and the second electrode layer.

23. However, Applicant has admitted in figure 2 that this configuration was known in the art.

24. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting device of Yamazaki, including a first insulating layer being formed between the luminous material layer and the first electrode, and a second insulating layer being formed between the luminous material layer and the second electrode layer, since this configuration is known in the art for effectively protecting the luminous material.

25. In regards to claims 15-19, Yamazaki discloses in figure 1, a light emitting device having a TFT (202) fabricated on an insulating base material (11); at least an insulating layer (42) a first electrode layer (47) to supply current to an organic luminous material layer (46), a second electrode layer (43), wherein the first electrode layer is made of a transparent material,⁵ the

⁴ Yamazaki, column 19, lines 47-50.

⁵ Yamazaki, column 8, lines 6-15.

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second electrode layer is made of a reflecting material,⁶ a predetermined pattern having a plurality of openings is formed to the insulating base material below the luminous material layer, and the first electrode layer is formed on convex section of the insulating layer owing to the plurality of openings.

26. While Yamazaki is silent to a method of manufacturing such a device, the steps of forming a first and second electrode layer, forming the luminous material layer, forming a second electrode, and a predetermined pattern having a plurality of openings developed to the transparent electrode layer are very broad. Hence, the structure disclosed by Yamazaki meets Applicant's recited method step limitations.

27. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to construct the light emitting device of Yamazaki, with the method of claims 15-19, since the method steps are obvious in light of the resultant structure.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 5,834,893 to Bulovic et al discloses an organic light-emitting device which is similar to Applicant's invention. Although Bulovic does not expressly disclose a TFT, Bulovic teaches in column 2, lines 13-17 that the IOLED may be formed directly on a transistor.

⁶ Yamazaki, column 7, lines 17-20.

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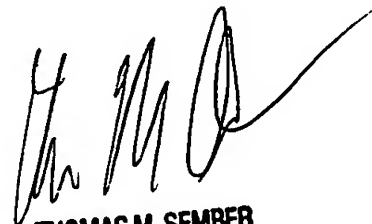
29. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Macchiarolo whose telephone number is (703) 305-7198.

The examiner can normally be reached on 8 - 4:30, M-F.

30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (703) 305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

31. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

pjm
August 7, 2003



THOMAS M. SEMBER
PRIMARY EXAMINER